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ALBANIA — COMMUNICATIONS AND TRANSPORTATION

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ALBANIA -- COMMUNICATIONS AND TRANSPORTATION

I. GENERAL DESCRIPTION

Transportation and communication facilities in Albania are inferior in both quantity and quality. Railroads are almost non-existent, the net of improved roads is sparse, the telephone and telegraph systems are primitive, and there is only one radio station of importance. Furthermore, since the existing means of communication serve only the major centers, much of the country is entirely without such facilities.

Albania, however, serves as a link between Italy and the eastern Balkans and to a lesser extent between Yugoslavia and Greece. The chief international communications are, from west to east, Durazzo-Tirana-Elbasan-Struga-Bitolj and Scutari-Kukes-Prizren-Skoplje; and from north to south, Podgorica-Scutari-Durazzo-Valona-Gjinokastre-Ioannina.

There is no central focus of routes in Albania. However, Scutari in the north, Elbasan in the central area, and Korca in the southeast are important regional foci.

A. Transportation

The road network is very sparse (although all the larger centers of population are now connected by good roads) (Map 2599). The main roads have been greatly improved during the last four years by the Albanian Road Authority, an Italian organization. The only alternate routes are tracks or lanes usable in dry weather only.

The network of improved roads consists of the north-south coastal and eastern frontier routes, connected by several transverse roads across the Albanian mountains. The coastal road leads from Scutari south to Tirana, Durazzo, Valona, and Sarande. The eastern frontier roads extend along a north-south corridor from Kukes south to Perat. The principal transverse routes are Scutari-Kukes, Tirana-Librash, Elbasan-Korca, and Valona-Gjorgucat. The principal exits into Yugoslavia are from Scutari to Bar and Podgorica, respectively, from Kukes to Prizren, and from Korca to Bitolj. Those into Greece are from Korca to Phlorina, and from Gjurgucat to Ioannina.

Though the transverse roads have been greatly improved, and some of them entirely reconstructed, they remain difficult mountain roads with steep grades and sharp curves. Most of the bridges over major streams are reinforced concrete, and are designed to carry 18-ton loads. However, on the transverse roads and on other roads near the frontier, there are many wooden bridges. Since most of the streams are unfordable and difficult of approach, destruction of bridges would seriously hamper motor traffic.

The only railroads known to be in operation are a few short stretches of narrow-gauge "Decauville" lines. (Map 2605) The longest of these, from Skala (the port of Valona) to the asphalt mines at Selenice, is only 19 miles. Although several standard-gauge railroads were planned before the war, probably none has reached actual construction, except the Durazzo-Elbasan-Labinoti line, which had reached an advanced stage of construction and may possibly be in operation. (35835)

B. Communication

The only important radio station is the government-owned Tirana short-wave transmitter (ZAA), which broadcasts in Albanian and carries on radio-telegraphic and -telephonic communication with Italy. In addition, there are low-power broadcasting transmitters at Tirana, Gjinokastrë (Argyrokastron); Korca and Peshkepije in Albania, and at Pristina and Prizren in recently annexed Yugoslav territory. Fixed-point radio-telegraphy within the country is carried on by stations at Durazzo, Elbasan, Korca, Kukes, Sarandë, Saseno Island, Scutari, and Valona, probably all operated by military or naval authorities. Stations at Durazzo, Sarandë, and Saseno communicate with ships. The Tirana and Kukes airfields and the Durazzo seaplane-alighting area are reported to have aeronautical radio facilities.

The principal towns and military posts are connected by the telegraph system, which is much more extensive than the telephone system. In 1939 there were 1,430 miles of line and 52 telegraph offices. The chief international connections are to Debar, Prizren, and Mitrovica (Yugoslavia); to Sofiya (Bulgaria) via Tetovo and Skoplje (Yugoslavia); to Bitolj and to Cetinje (Yugoslavia); and to Ioannina and Thessaloniki (Greece).

The Durazzo-Brindisi, Valona-Saseno Island-Brindisi, Valona-Otranto, and Sarandë-Corfu submarine cables provide additional international telegraphic connections. Hughes teleprinter equipment is used in Albania for transmission over them to Italy. A second Durazzo-Brindisi cable, equipped to handle both telegraphy and telephony, was started in 1940, but has probably not been completed.

All domestic telegraphy is handled by primitive Morse equipment. Traffic has always been light, and in all but the six largest towns a single operator has performed both telephonic and telegraphic functions.

The telephone network is in a primitive stage of development. With the exception of the Tirana-Durazzo line and several lines laid since 1940, all interurban circuits are made over wire installed and largely used for telegraphy. Until recently Albania was isolated from the telephone network of Europe. At present, however, international telephone connections include a Tirana-Debar-Prizren-Mitrovica (Yugoslavia) line; a line from Tirana to Tetovo, designed to link Albania with Bulgaria and Rumania (via Skoplje); and a line from Scutari to Bar (Yugoslavia), on the Dalmatian coast. Fifty-seven centrals were reported in 1941, all manual except one at Tirana.

Albania had a fairly efficient pre-war postal service with 53 post offices in 1939.

II. RADIO AND SPECIAL WIRELESS SERVICES

Albania had only one known radio station before the Italian occupation in 1939: the 3-kw. transmitter installed at Tirana a few months before the invasion. Little is known about Axis facilities installed since that time.

A. Administration.

Since the Italian occupation, the operation of the Tirana station, and of the other non-military stations erected since 1939, appears to have been left in the hands of the Albanian Directorate-General of Posts and Telegraphs, under Italian supervision. Planning of broadcasts is handled by the Albanian Broadcasting Corporation (E.S.A.R.), an affiliate of the Italian government-controlled corporation, E.I.A.R.

Because of the scarcity of telegraph lines in Albania and the physical difficulties of installing such lines, the pre-invasion Albanian government instituted a program of installing radiotelegraphic stations throughout the country. This program has apparently been continued by the Italians. The Italian government was reported, in 1940, to be planning a training school for Albanian radio operators, in order to release Italian personnel. Whether such a school now exists is not known. The Italians have also built a series of low-power broadcasting stations for Albania, most of which probably serve to relay Tirana programs.

B. Broadcasting Reception.

Few people in Albania have access to receiving sets. In 1938, when the only broadcasts in Albanian were those of Radio Bari (in southern Italy), local dealers estimated that there were 3,500 sets in the country and that annual peacetime sales amounted to 300-400. An increase in sales was expected to follow the inauguration of Radio Tirana at the end of 1938, however, and it is estimated that there are now (1943) more than 7,500 sets. To increase further the number of possible listeners, the government has been placing loudspeakers in village squares.

About 50 percent of the sets are thought to be equipped to receive short-wave broadcasts. As in other Axis-dominated countries, it is illegal to listen to United Nations short-wave broadcasts. Groups of more than three persons are not allowed to listen to any program except in public places. Owners of sets, however, reportedly listen regularly to London and Boston broadcasts, and copies of the programs are often typewritten and distributed. Axis broadcasts in Albanian include, in addition to those of the Bari station, programs from stations in Cetinje (Yugoslavia), Corfu, and Ioannina (Greece).

No clandestine station broadcasting in Albanian has been reported in Albania or elsewhere.

Table I. RADIO STATIONS[a/]

own, Station ame, Call sign	Function (Type of emission)	Co-ordinates (of transmitter) o ' "	Locational Data	Frequencies (kc.)	Power in antenna	Remarks
irana Tirana ZAA	BC, FX, Shortwave, A1 A2 A3	41 20 20 N. 19 47 40 E.	Transmitter in a field on N. edge of Tirana-Durazzo highway, about 1 mi. W. of airport, which is 1.8 mi. NW. of Tirana. Studio probably a room in the town hall.	4480 6084 7850 9960 15630 (6084 and 7850 probably the BC frequencies)	3 kw.	Installed in November 1938 by the Italian Marconi Co. Broadcasts in Albanian; provides a radio telephonic connection with Italy (at the time it was built, Albania had no telephonic connections with other nations); handles radiotelegraphic communication when the cables are not available. In December 1939 it was reported that a 50-kw. transmitter was about to replace ZAA, but no such change seems to have been made. (The imminent completion of this 50-kw. transmitter is mentioned later in a 1942 report.)
irana I	BC, medium-wave	--	--	1384 (elsewhere reported as 976 kc.)	250 w.	Marconi equipment.
irana II	BC, medium-wave	--	--	1280	1 kw.	Marconi equipment.
	BC, medium-wave	--	--	1056	10 w.	An experimental station called Tirana II, mentioned in 1940 reports.

bbreviations:

BC - Broadcasting
FX - Point-to-point
FC - Communicates with ships
FA - Communicates with aircraft
D/F - Direction-finder, maritime or aeronautical
RB - Radiobeacon, maritime or aeronautical
A1 - Pure continuous telegraphy
A2 - Modulated " "
A3 - Telephony
kw. - kilowatts
w. - watts
kc. - kilocycles

c transform kilocycles (frequency) into meters (wave-length) or vice-versa, divide 300,000 by the known figure.

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Town, Station name, Call sign	Function (Type of emission)	Co-ordinates (of transmitter) o ' "	Locational Data	Frequencies (kc.)	Power in antenna	Remarks
Peshkepijë						
---	BC	--	--	--	--	A low-power broadcasting station reported; may be for relaying.
Prishtina (formerly in Yugoslavia):						
Radio Kosova	BC	--	--	--	--	This station, in the Yugoslav territory annexed to Albania, started broadcasts in Albania in the summer of 1942.
Prizren (formerly in Yugoslavia)						
---	BC	--	--	--	--	A low-power medium-wave broadcasting station reported under construction in 1943. Expected to broadcast in Albanian.
Sarandë						
---	FX or FC	--	On Gulf of Butrinto S. of Sarandë, and opposite Corfu.	--	--	These are probably both Naval installations; one is FA, the other FC.
---	"	--	Another in ruined Church of Forty Saints on hill above town.	--	--	
Saseno Island						
IDB	FX	--	Between ridges in center of island.	185.2	1.2 kw.	A large Naval installation, well camouflaged and of the most modern type.
IDB	FC, A2, B, Navigational warnings, distress signals, weather bulletins.	40 29 56 N. 19 17 01 E.	In the harbor in San Nicolo Bay.	500,-	--	Probably operated by the Navy.
---	Probably FX	--	In vicinity of No. 3 Coast Defense Battery:	--	--	Probably part of defense communications system.
Scutari						
---	FX, A1	--	--	--	--	Small military FX station, reported under construction in 1940; probably now in operation.
Valona						
---	FX, shortwave	--	At oil depot ¼ mile N. of landing pier.	--	--	A low-power short-wave station.

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Town, Station name, Call sign	Function (Type of emission)	Co-ordinates (of transmitter) o ' "	Locational Data	Frequencies (kc.)	Power in antenna	Remarks
--	BC	--	--	--	10 kw.	Reported near completion in April 1943.
Tirana Airfield	FA, A1	41 20 N. 19 47 E. (Airfield)	1.8 mi. NW. of Tirana	--	--	A small telegraphic transmitter.
---	FX, long-wave	--	Reported near the Tirana airfield	--	--	This transmitter, which was used for communication with Zagreb and Brindisi, has been dismantled because its masts constituted a hazard to landing aircraft.
Gjinokastre" (Argyrokastron)						
---	BC	--	--	--	--	A low-power broadcasting station reported; may be for relaying Tirana programs.
Durazzo						
---	Probably FX	--	On Rastbul hill, E. of Durazzo	--	--	Probably a Naval installation.
---	Probably FC	--	At Naval Barracks	500 kc.	--	Probably a Naval FC station; transmits meteorological bulletins on 500 kc., etc.
Durazzo seaplane alighting area.	Probably FA	41 19 N. 19 27 E. (alighting area)	On coast, adjacent to Durazzo Harbor.	--	--	--
Elbasan						
---	Probably FX	--	--	--	--	A military station.
Korca						
---	BC	--	--	--	--	A low-power broadcasting station reported; may be for relaying.
---	FX, A1	--	--	--	--	Military station, reported under construction in 1940, probably now in operation.
Kukes" 12		42 05 N.	--	--	--	--
Kukes" Airfield	FA	20 25 E. (Airfield)	--	--	--	Small FX station reported under
---	FX, A1	---	--	--	--	construction in 1940.

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III. TELEGRAPH

A. Pattern of the Network and Localization of Lines

1. Extent of Development. The telegraph network is much more extensive than the telephone system. The principal towns are connected by telegraph lines with military posts in villages and observation points. The majority of the towns are linked by two wires; however, three wires link a few of the most important towns, such as Tirana and Durazzo, while only a single wire connects some of the smaller towns with the system. In 1939 there were 1,430 miles of line, 43 circuits, and 52 offices (54 in 1941). The following offices were officially reported in 1930:

Alessio (Lesh)
Ballsh
Berat
Bicaj
Bilishtë
Bubullimë
Burelë
Cakran
Cerevodë (Skrapar)
Delvinë
Durazzo (Durrës)
Elbasan
Ersekë (Kolonjë)
Fier
Frasher
Gjinokastrë (Argyrokastron)
Gjorgucat
Gramsh
Gusmar (Kurvelesh)
Himara
Ishm
Kavajë
Kelcyrë (Klisura)
Klos
Konispol (Camerije)
Koplik
Korca
Krujë
Kukës
Leskovik
Libofshë
Libohove
Lushnjë
Magellarë
Milot
Peqin
Peshkëpijë
Pogradec
Polican (Pogoni)
Prëmet
Puke
Pulaj
Qukës
Roskovec
Sarandë (Porto Edda)
Scutari (Shkodër)(2)
Shengjin (San Giovanni di Medua)
Shenpale
Shijak
Tepelenë
Tirana
Tropojë (Trifush)
Valona (Vlorë)
Valona port
Vau Dejes
Zerqan

By May 1940 the following additional offices had been opened: Arta
Bullenjes
Kucovë (Vajguras)
Librash
Livorë

2. International Connections.

Tirana-Debar (Yugoslavia)
Tirana-Tetovo-Skoplje-(Yugoslavia)-Sofia (Bulgaria)
Korca-Bitolj (Yugoslavia)
Korca-Thessaloniki (Greece)
Gjinokastrë-Ioannina (Greece)
Scutari-Cetinje (Yugoslavia)
Tirana-Debar-Prizren-Mitrovica, an eight-line cable for telephone and telegraph, reported completed by the Italians. This line has been reported cut at least three times by guerrillas.

B. Station Equipment

All domestic telegraphy is reported to be by Morse equipment. Apparently the Hughes teleprinters officially reported are used only on the cables to Italy. Some important offices have receivers for recording Morse on tape, but lack of power usually precludes reception other than by ear.

C. Route Equipment

1. Wire. Wire is not uniform in size or material, Diameters vary from 2 to 4 mm., and the metal is sometimes copper, but more often zinc-plated iron.

2. Poles. Poles are of rough wood 10 to 20 feet high and 5 to 8 inches thick. They are probably incapable of supporting great strain.

3. Insulators. Insulators are usually porcelain and are fastened to the end of a single iron stay inserted in the pole. In the towns, where poles are more uniform than in the country, wires are sometimes attached to insulators on horizontal metal arms fastened to the pole by iron bands.

D. Standard of Maintenance

Mountainous country makes maintenance difficult and service unreliable.

E. Administration

The Director-General of Posts and Telegraphs at Tirana administers the telephone and telegraph system. District offices are at Berat, Durazzo, Elbasan, Gjinokastrë, Korca, Kukës, Peshkëpijë, Scutari, and Valona. Before the Italian occupation, the offices of director-general and his technical assistant were held by engineers; the latter supervised a controller of lines and three mechanics. In most towns there was also a local director, who had some technical knowldege. Except in the larger towns (Tirana, Durazzo, Korca, Scutari, Valona, Gjinokastrë), the operator performed both telephone and telegraph functions. There were about 100 linemen, whose knowledge came largely from practice.

IV. TELEPHONE AND CABLE

A. Telephone

1. Pattern of the Network and Localization of Lines. In 1941 there were 57 exchanges in Albania. The regular network connects the towns; a special network links Gendarmerie posts in the outlying districts. The only interurban line used exclusively for telephony, before 1940, was that between Durazzo and Tirana, which consisted of two 2-wire circuits. Otherwise, interurban circuits were made over wires installed and largely used for telegraphy.

International telephone connections include: the eight-line cable between Tirana and Mitrovica, by way of Debar and Prizren, reported to have been completed by the Italians; a telephone line from Tirana to Tetovo to link Albania with Bulgaria and Rumania by way of Skoplje, reported under construction in October 1941; and a line connecting Scutari in the north with Bar in Yugoslavia.

2. Centrals.

a. Number of Exchanges, Lines, and Telephones, 1941.

Exchanges			Telephones	
	Number	Lines	of subscribers	1,194
			for the public	48
Manual	56	957	TOTAL	1,242
Automatic	1	150	in Durazzo (1940)	193
			in Tirana (1940)	400
				(150 automatic)

b. Telephones in Towns, 1929.

Alessio	1	Konispol	-	Pogradec	2
Berat	5	Koplik	-	Sarandë	15
Bilishtë	5	Korça	26	Shijak	1
Cerevodë	-	Kukës	1	Scutari	16
Delvinë	2	Leskovik	2	Tepelenë	3
Durazzo	71	Lushnjë	2	Tirana	60
Elbasan	11	Peqin	1	Valona	6
Ersekë	3	Prëmet	2		
Fier	4	Peshkëpijë	-		
Gjinokastrë	15				
Kavajë	7				
Këlcyrë	1				

c. Make of Equipment. Siemen's telephones are most common, although a variety of types is used, since each subscriber must buy his own telephone. Italian instruments are more common in the south, Austrian in the north.

3. Route Equipment. (See III C.) The one purely telephonic line in Albania before the war, Durazzo to Tirana, was on bare wire. Some wire is copper, but much is zinc-coated iron, which is satisfactory for telegraphy but poor for long-distance telephony.

4. Standard of Maintenance. (See III D.) Personnel has been limited and sabotage has been extensive. More important sectors on which wire has been reported removed and poles broken include:

	Length of affected sector (miles)
Tirana-Durazzo,	5
Tirana-Debar,	9.3
Debar-Magellarë	3
Valona-Ballsh	8
Scutari-Koplik, near village of Gruemir	-
Berat-Këlcyrë	5
Prëmet-Leskovik	2
Peshkëpijë-Bicaj, whole line destroyed	-
Valona-Tepelenë	4.3
Scutari-Podgorica, in various places	-
Gjinokastrë-Delvinë	2

The Tirana-Mitrovica cable, recently laid by the Italians, has been reported cut at least three times.

5. Administration. (See III E.) The automatic exchange in Tirana was operated by the army.

B. Submarine Cables

1. Known Cables.	Date	Number of Conductors	Length in IMM 1/	Administration
Durazzo-Brindisi	1914/24	1	87	It. Govt.
Valona-Saseno-Brindisi	-	1	-	-
Valona-Otranto	1864	1	60	It. Govt.
Sarandë-Corfu	-	-	-	-

2. Planned Cable. In 1939 money was set aside for a new Durazzo-Brindisi cable, and work was ordered expedited in 1940. Although preliminary work was done, the cable apparently was not completed, at least not by December 1940.

3. Operation. All cables are government-owned and operated.

4. Equipment.

a. Type. All cables are of old and simple design, with a single conductor for telegraphy only. The planned Durazzo-Brindisi cable was to be a modern multi-conductor cable for both telephony and telegraphy. Teleprinter machines, apparently Hughes, have been installed at Durazzo, Valona, and Tirana, for use on the submarine circuits.

b. Cable Landings. The Durazzo-Brindisi cable comes ashore at a small concrete hut about 1.8 miles north of Durazzo. The cable is about 12½ cm. (5 inches) in circumference. From the hut the line runs overland southwest along the coast for a mile, and then inland across cliffs and in a southeasterly direction toward Durazzo. The cable hut of the Valona-Saseno-Brindisi cable is believed to be between one and two miles west of Valona. The cable from Corfu to Sarandë lands in the northeastern corner of the bay.

1/ International Marine Miles

V. POSTAL SERVICE

The Albanian postal service was reported to have become fairly efficient in the 1930's. In 1939 there were 53 post offices, 9 district offices, and the general office at Tirana. (See III E. for details of administration.)

VI. RAILROADS

There are no railroads definitely known to be in operation in Albania other than short stretches of narrow-gauge "Decauville" lines. 1/ A number of railroads, however, were planned, and one of them had reached an advanced stage of construction and may possibly now be operating.

A. Durazzo-Elbasan-Labinoti Line.

The only railroad upon which construction had made substantial progress at the time of the most recent confirmed report is the line from the port of Durazzo to Elbasan and Labinoti. Construction was started on 27 April 1940, and 5,000 men are reported to have been working on the line. Its immediate purpose is to provide cheap transportation to the sea for the iron and chrome ores of Labinoti, although there appears also to be an important strategic objective in its construction, in that it was planned eventually to connect with existing Greek lines to form a trans-Balkan route. The route is along the coastal plain from Durazzo via Kavaje, and up the Shkumbin Valley to Elbasan, a distance of about 52 miles, and to Labinoti, 60 miles from Durazzo. Reports regarding the status of the line conflict. Completion to Labinoti was reported in August 1942, but the report was not confirmed, and a recent British report indicates that construction is still proceeding. A more recent report, however, indicates that the project was dropped in May 1943. At that time, the ground had been leveled and prepared at least as far as Elbasan, all cut and fill work, though of poor quality, had been completed, and reinforced concrete bridges and culverts were in place; no ballast or tracks, however, had been laid.

There is no conclusive evidence that the Durazzo-Elbasan-Labinoti railroad passes through Tirana, the capital, although several reports based on a single, probably erroneous, article indicate that it does. Difficult mountain terrain and Tirana's lack of strategic significance make construction of a railroad between the capital and the Shkumbin Valley at Elbasan very doubtful.

The railroad was planned as a single-track standard-gauge line, to be operated by a division of the Italian State Railways. The line was to have been capable of accommodating trains with speeds up to 100 kilometers (62 miles) per hour. In the 84 kilometers (52 miles) between Durazzo and Elbasan, six tunnels are reported, with a total length of 1 3/8 miles. The terrain of the coastal plain--valley route indicates that the western half probably has a low gradient. The terrain in the eastern half, however, is rugged.

1/ Very lightly constructed narrow-gauge lines of limited capacity, used mainly for hauling mineral traffic from mines to main transport routes and to ports. The gauge is under 2 feet, and trains do not usually exceed 10 cars, of 1.5 tons capacity each, hauled by steam and Diesel locomotives of 60 horsepower and less. The lines are poorly graded, and the track is in sections, with rails permanently attached to the ties for easy removal and replacement (Map 2605).

B. Projected Lines.

Several additional lines were planned, but it is very doubtful that construction of any of them is under way. These lines include:

1) A railroad connecting Durazzo and Tirana. This route was surveyed several years ago and the ground was graded, but lack of funds caused the project to be dropped. A report of October 1942 states that work may have been resumed, but this is not confirmed. It is very improbable that the line is under construction or completed.

2) A standard-gauge line from Durazzo to Valona along the coast.

3) A standard-gauge line connecting with the Durazzo-Elbasan line at Elbasan and extending to Struga, connecting there with the narrow-gauge Yugoslavian line, in newly-acquired Albanian territory, to Skoplje and thence with the main Balkan system.

4) A standard-gauge line from the port of Valona to Florina, in Greece, forming a new important trans-Balkan route.

C. Decauville Lines.

Albania has a number of short stretches of Decauville railway lines, all of purely local significance. The longest is a nineteen mile line from Skala (the port of Valona) to asphalt mines at Selenice. In 1939 one steam and one gasoline locomotive were reported and daily freight and passenger service were maintained. The port of Valona is served by several other Decauville lines, including a horse tramway about a mile in length leading to the town, and several very short lines connecting various parts of the port. These lines are not all interconnected. Cars on lines in the port itself are reported of about one-ton capacity each and are shunted by hand or by horse.

A very short Decauville line connects the west mole at the port of Durazzo with the Customs House.

Two short stretches of light railway which formerly carried timber to Rodoni Roads have been abandoned.

In connection with their highway construction program, the Italians are reported to have laid down forty miles of light railway, probably temporary, and brought in eleven locomotives.

VII. ROADS

A. General Characteristics

The road net of Albania is one of the least developed in Europe. Not counting tracks or trails, Albania has only 1,180 miles (1,900 km.) of roads, an average of 0.11 miles of road per square mile (0.07 km. per square kilometer) of territory, and 1.1 miles (1.9 km.) per 1,000 inhabitants. The density of the road net in Bulgaria is almost three times as high, 0.30 miles per square mile (0.19 km. per square kilometer). Both suffer in comparison with France, whose net has a density of 0.97 miles per square mile (0.62 km. per square kilometer). About 1,553 miles (2,500 kilometers) of trails supplement the road net. These are generally suitable only for travel by foot, pack train, or light wheeled vehicles; some trails along lower mountain slopes and near villages or towns, however, can be used by light motor vehicles.

Although the road net is sparse, all of the principal cities of Albania are now connected by fair roads in a reasonably good state of repair. There are few alternate routes, and blockade of any one road might either stop traffic, or involve lengthy detours. The principal weakness of the Albanian road net lies in the transverse routes across the mountainous interior of the country. Even though these have been improved, and at places entirely rebuilt by the Italians in recent years, they are winding and steep and subject to snow blockade, destructive floods, and landslides. It is probably still true that travel is easier from Korca in eastern Albania to Greece or Yugoslavia than movement from Korca to Valona or Durazzo.

1. Pattern. Three groups of roads make up the pattern of the Albanian net: (a) a north-south road along the coastal plains and hills, (b) a series of west-east roads leading from points on the coastal road across the mountainous interior of Albania, and connecting with (c) a north-south road in the corridor formed by the valleys and basins of eastern Albania.

The road along the coastal plain links Scutari, Alessio, Tirana, Durazzo, Valona, and Sarandë (Santi Quaranti). From Scutari to Valona the road follows the inland portion of the plain to avoid coastal marshes and lagoons. South of Valona the road runs along mountainous slopes which form the coast line to Sarandë.

From points on the coastal net nine transverse roads lead across the mountains of Albania. North of Elbasan the trend of the roads is toward the east, south of Elbasan toward the southeast. The most important of these roads, from north to south, are as follows:

Scutari -- Kukës via Pukë
Zallë -- Peshkëpijë via Krujë and Burelë
Tirana -- Shtëpenz
Tirana -- Elbasan -- Librash
Elbasan -- Korca via Gramsh
Lushnjë -- Perat via Berat
Valona -- Gjorgucat via Tepelenë

In eastern Albania a series of valleys and basins form a corridor for a north-south road from Kukës to Korca. Peshkëpijë, Shtepënz, Librash, and Lin on this road are important junction points for transverse east-west routes originating from the coastal road. From Korca a road extends south to Perat on the Greek frontier.

Six roads cross the frontier into Yugoslavia. From Scutari, a road runs west to Bar, and another north to Podgorica. A road from Kukës leads to Prizren. Two roads branch from the Peshkëpijë-Korca road at Magellarë and Lin, respectively, and converge on Struga, at which point a good road runs to Bitolj.

Four roads connect Albania and Greece. One runs east from Korca by way of Bilishtë to Phlorina. From Perat and Gjorgucat two roads cross the frontier and meet at Elaig in Greece, from which point a single road continues to Ioannina. From Sarandë a route leading south crosses the Greek frontier at Konispol, which lies a short distance inland from the Bay of Sagiada.

B. Natural Conditions Along Roads

1. Climate and Weather. On the coastal plains conditions are least favorable for motor transport during the rainy season, from October to March. During this period wet soil frequently prevents movement except on surfaced roads, and heavy rains often cause washing of road surfaces. Rivers are usually unfordable in winter. Heavy winter rains and the melting of snow in the mountains in spring may cause flooding of roads crossing the coastal plain. Unusually heavy rains may wash away bridges, and at times streams are so swift that pontoon bridges cannot be maintained.

From May or June to September the lowlands experience a relatively dry season, during which movement on both dirt roads and fields is usually possible, although occasional showers cause temporary handicaps. Dust sometimes causes limited visibility. Streams are very low, or entirely dry, and may be forded in many places. Even some areas of coastal marshland dry out by midsummer.

In the mountainous interior, climatic handicaps to travel are more serious than in the lowlands. There is no dry season and annual rainfall is high. At any time of the year a cloud burst may make roads impassable by flooding, washing out bridges, or by depositing large quantities of soil and rock on roads. Blocking by landslides is a problem on some sections of road, such as that near Ndroq on the Durazzo--Tirana road; near Mt. Terbac on the Tirana--Elbasan road; and west of Librash on the Elbasan--Librash road.

In winter the interior of Albania is difficult of access because snow hampers or blocks transportation above an altitude of 3,300 feet, and occasionally causes inconveniences even below that level. Snow is estimated to fall on ten days a month during winter in the mountains, and may fall at any time from November to April. On the average, snow lies on the ground 25 days a year in the southern mountains, and more than 75 days a year in the northern mountains. The northern mountains are often snow-covered until August. The snow may be deep; work on the Elbasan--Librash and Scutari--Kukës roads was reported delayed by 10 feet of snow. Roads known to be blocked periodically by snow are (from north to south):

(a) Scutari -- Kukës: at Puke, 2,824 ft., and on the mountains between Puke and Kukës.

(b) Zallë -- Peshkëpijë: on Shtames Pass, 4,088 ft., between Krujë and Burelë.

(c) Peshkëpijë -- Librash: section between Ostren-i-Vogel and Klenj.

(d) Librash -- Korca: on Thanes Pass, 3,001 ft., northwest of Lake Ohridska.

(e) Korca -- Perat: especially on Qarrit Pass, 3,553 ft.

(f) Korca -- Phlorina: on Pisoderi Pass, 4,504 ft.

2. Terrain Adjacent to Roads.

a. Cover. Cover on terrain adjacent to the roads is poor in the coastal lowland and hills; good, but usually inaccessible, in the mountainous region.

In the lowlands, vegetation offers good opportunities for concealment only locally. Approximately two-thirds of Albanian lowlands are covered with stunted, summer-green brushwood of low stature. There are also large barren areas with only scattered low bushes, and dry, short-grass meadow, or marshy grassland. Scattered but luxuriant stands of evergreen brushwood occasionally afford cover near the coast, and dense thickets of trees and brush occur on periodically flooded land near the mouths of the rivers. Cultivated land is principally in the form of small, hedge-bordered fields, and abandoned olive orchards are common on the outskirts of the larger towns.

Roads through the mountainous regions have two broad types of cover: (a) dry deciduous forest extending up to 3,000 feet; (b) montane (beech and conifer) forest, lying above this altitude, and becoming dense at about 4,000 feet. As most of the mountain roads seldom attain altitudes above 3,000 feet, the densest plant cover available from the roads is afforded by dry, open deciduous forest with an undergrowth of predominantly summer-green brush, in those few areas where this forest has not been destroyed or degraded to brushwood. Most of the trees are bare in winter and would afford almost no concealment. The Tirana -- Elbasan road traverses such woods on the divide between the Arzen and Shkumbin Rivers; the Scutari -- Kukës road crosses a similar forest west of the Drin River; the Kukës--Peshkëpijë--Librash route passes through dry woods in the highlands between Strikcan and Librash. Almost the whole length of the Korca--Perat highway runs through this type of forest. The Valona--Sarandë road passes through dry, open pine woods on the Karaburun Peninsula between Valona and Himara.

The dense montane forests seldom extend below 4,000 feet. Thus, good concealment would be afforded large groups of men above and away from the roads, while road traffic would lack adequate concealment.

The deciduous forests and brushwood are green in late spring and summer, turn yellow, red, and brown in autumn and are largely bare in winter. The grasslands lose their bright green coloration early in the summer, and are yellow or brown until the onset of fall rains. The evergreen shrubs, which occur either in solid patches or intermixed with deciduous vegetation, retain their dark or bluish-green tone at all seasons. The montane forests change color like the dry woods wherever the beech dominates, but remain dark green where the conifers are more abundant than the beech (especially in the mountains of the southeast).

C. Deployment and Movement Across Country

The possibilities for movement of motor vehicles from the roads in Albania are in general quite limited. Much of the coastal region is marshy, while the basins and valleys in the interior are small in area, and separated from one another by rugged, mountainous terrain.

In the coastal area deployment is possible where the road runs along the lower slopes of mountains and highlands overlooking the plains. Movement is also feasible on some of the slopes of hills separating the marshy embayments which extend from Scutari to Valona. South of Valona the coastal road is either confined to a narrow strip of lowland, or built upon slopes of mountains that dip steeply into the sea.

In the interior of Albania terrain suitable for deployment is local and discontinuous in character. Even the roads -- usually tracks -- which branch from the main roads would be of no value except as turn-outs. In eastern Albania some deployment is possible in dry weather in the Korca Plain, and in places along the roads near Lakes Ohridsko and Prespansko.

(A summary of terrain adjacent to the road net is given in the inset of Map 2599. The text explanatory to Map 2599 is given in Appendix I.)

D. Administration.

Prior to Italian occupation, building and maintenance of roads in Albania were under the joint direction of the Ministry of Public Works, and the Ministry of the Interior. New construction was financed largely by loans from Italy, while maintenance was paid for out of gasoline and vehicle taxes. The Society for the Economic Development of Albania, organized under government auspices in 1927, built several all-weather roads as part of its general development program. However, new construction lagged, and road maintenance, was generally insufficient under Albanian administration.

After occupying Albania, the Italian Government in May 1939, set up and staffed with its own personnel the Albanian Road Authority (Azienda Strade Albanesi), modelled after the road organization which built the modern highways of Italy (Azienda Autonoma Statale della Strada). This body, operating as a division of the Inspectorate of Public Works of Albania, was placed in charge of the principal roads of the country. These roads, a total of approximately 756 miles (1,200 km.), were to be completed or improved for military as well as economic reasons. For this purpose the Italian Government provided 800,000,000 lire in 1940. The following roads were included in the network under the control of the Albanian Road Authority:

1) Durazzo -- Vorre" -- Tirana

2) Scutari -- Alessio -- Tirana -- Elbasan

3) Durazzo -- Rogozhine" -- Elbasan

4) Elbasan -- Librash -- Lin

5) Elbasan -- Gramsh -- Maliq -- Korca

6) Librash -- Peshkëpije"

7) Scutari -- Puke -- Kukës

8) Rogozhinë -- Lushnje" -- Valona

9) Lushnje" -- Berat -- Këlcyrë -- Perat

10) Valona -- Tepelenë -- Gjinocastrë -- Gjorgucat -- Frontier

11) Valona -- Sarandë

In addition the Albanian Road Authority undertook to improve the road from Alessio to the port of San Giovanni di Medua and to complete the unfinished Tirana--Gramsh-- Korca road. The roads listed above were to constitute a basic net of improved roads, to be expanded when military necessity or increased traffic warranted. Roads other than those under control of the Albanian Road Authority and usually of local importance only, were to be administered by the Albanian Minister of Public Works.

E. Standards of Construction and Quality

Aside from city streets and a few miles of asphalt road between Tirana and the coast, Albania had no roads paved with bitumen, concrete, asphalt, or brick in 1938. The usual Albanian improved road, often erroneously classed as water-bound macadam, consisted of a course of stones over levelled ground, topped by loose earth, with a final layer of river-sand. Consolidation of these materials was left to traffic. In 1940 the Italians reported that almost all of the road net was inadequate for heavy traffic, and had undergone extreme deterioration during the Greek war. The principal shortcomings of the road lay in the lack of proper drainage, the tendency of the bed to be weak at the edges, lack of uniform width, and poor alignment.

1. Surface, Roadbed, and Width. In 1939 the Albanian Road Authority planned to improve, or where necessary rebuild, approximately 745 miles (1,200 km.) of road within two years: 435 miles (700 km.) were to be 8 meters wide, and paved with asphalt on a macadam base; 310 mi. (500 km.) were to be 6 meters wide and of waterbound macadam construction. The actual roadway, i.e., width of paved surface, was set at 6 and 4 meters, respectively. Maximum grades were established at 7 percent, and minimum radii of curves fixed at 100 feet. The foundation of macadam roads was to be built of coarse rock, with a depth of 7-8 inches (20 cm.), capped by a 7-inch (18-cm.) layer of road metal. Asphalted roads were to be built on the same base, sealed by an application of cold liquid bitumen, and topped by warm bitumen. All of these roads were designed to accommodate trucks; the asphalt roads were to be suitable for trucks and trailers weighing 24-28 tons.

To carry out the road building program, 8,000 Albanian laborers were employed in 1939. As work is limited to 8 months of the year, it was found necessary to import 9,000 additional workmen from Italy in order to maintain the desired rate of progress. Work camps were established at various points, and included shops and storage facilities. By 1941, 162 barracks,

with hospitals, had been erected to house the labor force. The road machinery brought in by the Italians included 65 km. of narrow-gauge track, 11 locomotives, 960 trucks, 450 dump carts, 91 rockcrushers, 91 steam rollers, 75 compressed air machines, and 40 motorized pumps. To what extent this program has been realized, or the standards adhered to, cannot be definitely established. A recent report (1 August 1943) states that the Albanian road net now consists of about 550 miles (885 km.) of asphalt, 100 miles (160 km.) of water-bound macadam, and 600 miles (965 km.) of metalled (superficial gravel or crushed rock) road. From this it may be surmised that the program for building heavy-duty truck roads has been substantially realized, and that metalling has been emphasized, probably as a temporary measure, at the expense of water-bound-macadam construction on roads of lighter traffic.

2. Bridges. Albania is intersected by a great number of perennial streams and rivers, and consequently the roads have many stream crossings. The Turkish government had built a number of stone-arch bridges, many of which, though narrow and probably limited to 5-ton loads, are still in use on minor roads. Between 1924 and 1936 the Albanian government undertook an extensive bridge-building program. Italy furnished the necessary funds and engineers, while the government provided labor by conscription. By 1937, 4,000 culverts and small bridges, 100 larger bridges with spans over 32 feet (10 m.) and several bridges with spans over 328 feet (100 m.) had been constructed. All bridges were designed to carry an 18-ton load.

Since the Italian occupation bridge construction has been carried forward vigorously. In 1940 it was reported that 9 large bridges had been completed, and that 20 were under construction. A total of 947 small bridges were also built, and 649 existing bridges strengthened. Recent construction, as well as the earlier projects completed under Italian supervision, are of reinforced concrete. While the principal streams are now spanned by bridges of this type, many wooden structures are reportedly still to be found in the mountainous interior and on the eastern frontier.

F. Maintenance

1. Equipment. Before Italian occupation there seems to have been no systematic program for maintenance of public roads. In the contract for the Durazzo-Tirana road, for example, one of the terms in the agreement with the Italian contractors provided for a 10-year period of upkeep following construction, indicating that Albania had neither the organization nor the equipment to maintain its roads. The Albanian budget for 1938-39 allotted only $16,250.00 for maintenance of roads. Though labor in Albania is cheap, this sum would seem to have been far below minimum needs, especially when the mountainous character of the country is taken into consideration. The Albanian government possessed no modern road-maintenance machinery; imports for road construction consisted exclusively of such hand tools as wheelbarrows, shovels, and picks.

Since 1939 the primary aim of the Italians has been to reconstruct the Albanian road net according to uniform standards, rather than to maintain the existing roads. In the meantime extensive temporary repairs have been made, and maintenance stations established at various points in the country. Steam rollers and other heavy equipment have been introduced, but most operations are still being done by hand.

2. Locally Available Materials. Materials suitable for road construction and maintenance are abundant throughout most of Albania. Gravel and sand deposits occur in the Lake Scutari area and southward along the inland margin of the coastal plain as far as Tirana. Elsewhere, such materials can be found along the banks of streams issuing from the mountains. On the sea margin of the coastal plain, material suitable for road ballast is scarce, though seldom more than 10 miles distant from the road. Rock suitable for crushing is available throughout the interior. Natural asphalt of excellent quality for road surfacing is mined at Selenicë, 10 miles northeast of Valona. Because this asphalt softens only at 59°C. (129°F.) it has been the practice to add crude oil to attain proper consistency. However, unprocessed asphalt has reportedly been successfully employed for road surfacing. Production of crude asphalt for 1940 was estimated at 5,000 metric tons.

Timber suitable for bridge and trestle construction is abundant, but generally inaccessible. The oak forest in the coastal zone has been heavily cut, and sizeable timber is confined to remote sites. In the eastern and central areas mature stands of pine and beech are found above 3,000 feet.

G. Traffic Density, Vehicles, and Capacity of Roads

Notwithstanding the lack of a railroad system and the presence of considerable petroleum resources, motor transport in pre-war Albania was not well developed. In 1939, busses, trucks, and private automobiles totalled about 1,000 vehicles. The majority of these were registered in the communities of Tirana, Durazzo, and Scutari. At Korca only 50 motor vehicles of all types were registered.

Trucks used for motor transport were of the 4-ton type or smaller. Many of these were equipped to carry passengers as well as freight. Heavier trucks could not be employed

because of the limited-load bridges, sharp turns, narrow roadway, and heavy grades encountered when travel over any considerable distance was attempted. Since 1939 the number of trucks has undoubtedly increased. A recent report (27 July 1943) estimates that about 1,300 trucks are now in active use. The Italians are known to be using trucks in transporting chrome and copper ore from the interior to port cities.

On all the more important roads of Albania busses were operated once or more a day. Many of the vehicles used as carriers were merely large automobiles, or jitneys. Schedules and fares were flexible, and long delays were frequent. There was no regulation of carrier service by the state. The following lines are known to have been in operation in 1940:

Line	Number of round trips daily
Durazzo--Scutari	1 - 3
Durazzo--Tirana	7
Tirana--Korca	1
Tirana--Elbasan	2
Elbasan--Berat	2
Durazzo--Valona	2
Valona--Sarandë	1
Valona--Gjinokastrë	1
Korca--Gjinokastrë	3 round trips per week
Korca--Phlorina (Greece)	1
Korca-Bitolj (Yugoslavia)	no information on frequency of service
Gjinokastrë--Ioannina (Greece)	no information on frequency of service

Before Italian occupation, there were few repair shops or service facilities for motor transport in Albania. Bus lines had shops in the larger centers which provided service to motorists and truckers. Stocks of spare parts were limited to the most essential items. Gasoline and lubricating oil were available only in the major cities. The quality and extent of facilities for fuel storage may be judged by the fact that motorists were warned to filter gasoline and carry spare containers. Gasoline was not produced in Albania, as the crude oil was shipped to Italy for refining.

Estimates of road capacity, in terms of tons per day, are given in the road summary and route descriptions.

H. Summary of Roads and Route Descriptions

Note: Throughout the report, and on the map (Map 2599), each road is identified by a single number. The descriptions which follow are not numbered consecutively because several roads which appear in the table are not described.

Distance figures are approximate. Those given in the available sources seldom check exactly with each other or with measurements taken from the GSGS 1:250,000 maps.

Most of the new Italian-built roads are 26.2 feet (8 m.) wide, with a 19.7-foot (6-m.) carriageway. Roads which are described in the text as 19.7 - 26.2 feet (6 - 8 m.) wide probably belong in this category.

The capacity figures quoted here probably represent a minimum estimate. American Supply Force estimates for comparable roads in Iran are almost twice as high.

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SUMMARY

COASTAL NET

No.	Road	Distance Mi.	Km.	Width	Surface	Est. daily cap. in tons 2/	Remarks
1.	Scutari--Durazzo 1/	82.6	133.0	2-way (6-8 m.)	Asphalt	2,000	Good condition (11/42). Subject to flooding in Scutari--Alessio section and near Vorrë.
2.	Durazzo--Valona 1/	78.9	127.2	2-way (6-8 m.)	Asphalt	2,500	Good, fast road (1/43). All weather except in areas near Semeni and Vijosë Rivers.
3.	Valona--Sarandë 1/	82.4	132.8	Generally 2-way	Metalled	1,000	Condition fair. Narrow at points. Snow-blocking in Logora Pass. Landslides in mountainous stretches.
4.	Scutari--Pulaj	14.9	24.0				Probably subject to winter flooding.
5.	Alessio--San Giovanni di Medua	5.2	8.4	2-way (6-8 m.)	Metalled, may be asphalt	1,000	All weather.
6.	Alessio--Vau Dejes to Scutari	18.6	30.0	Generally 2-way	Probably metalled		May serve as alternate for Alessio--Scutari section of Scutari--Durazzo road (No. 1).
7.	Patok--Shulluz	6.8	11.0				Connects small port of Patok with Scutari--Durazzo (No. 1). Subject to flooding.
8.	Zallë--Tirana	10.5	17.0	2-way	Probably metalled		Alternate to Vorrë--Tirana (No. 9). All weather.
9.	Vorrë--Tirana 1/	9.3	15.8	2-way	Asphalt		All weather. Good condition.
10.	Durazzo--Tirana Ndroq 1/	23.4	37.8	2-way (6-8 m.)	Asphalt	2,000	All weather. Good condition. Landslides in Arzen Valley.

1/ Detailed description in text.

2/ These probably represent minimum estimates; see note at beginning of these tables.

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SUMMARY

TRANSVERSE ROADS

No.	Road	Distance Mi.	Km.	Width	Surface	Est. daily cap. in tons	Remarks
11.	Scutari--Kodra	ca. 19.8	32.0	2-way to Drishta (km. 8.4)			Road completed to Drishta. Reported completed to Kodra.
12.	Scutari--Kukës 1/	ca. 88.9	143.6	2-way	Asphalt	2,500	Condition good. Subject to snow-blocking in mountains.
13.	Zallë-Krujë--Burelë-Peshkëpijë 1/	ca. 59.6	96.0	2-way to Burgajet	Metalled to Burgajet.		Under construction. Probably completed. Snow-blocking in passes.
14.	Tirana--Shtëpenz 1/	ca. 46.2	74.5				Snow-blocking in mountains. Reported as dry weather road.
15.	Tirana--Elbasan 1/	37.7	56.0	2-way (6-8 m.)	Asphalt	2,000	Landslides in Arzen Valley. Good condition. Snow-blocking in pass. Some weak bridges.
16.	Elbasan--Librash 1/	15.5	25.0	2-way (6-8 m.)	Water-bound macadam, probably asphalt	2,000	Bridges in 1940 limited to 4 tons.
17.	Rogozhinë--Elbasan	27.8	44.8	2-way (6-8 m.)	Metalled; reported asphalt		All weather, good condition.
18.	Elbasan--Korca 1/	67.7	109.1	2-way	Metalled		Reported complete, probably still under construction.
19.	Lushnjë--Berat--Perat 1/	92.0	148.5	2-way (6-8 m.)	Metalled, probably asphalt	1,500	Road narrows in mountains. Fair condition.
20.	Valona--Tepelenë 1/	50.7	81.7	Generally 2-way	Reported asphalt	1,500	Fair condition. All weather.
21.	Tepelenë--Gjorgucat 1/	30.4	49.0	2-way	Reported asphalt	1,500	Good condition to Gjinocastrë. Some rough sections beyond.
21a.	Tepelenë--Këlcyrë	5.4	8.8	2-way	Metalled		
22.	Sarandë--Gjorgucat 1/	27.4	44.1	Generally 1-way	Metalled		All weather.

1/ Detailed description in text.

SUMMARY

EASTERN CORRIDOR ROADS

No.	Road	Distance Mi.	Km.	Width	Surface	Est. daily cap. in tons	Remarks
23.	Kukës-Peshkëpijë 1/	27.3	44.0	Probably 2-way	Reported asphalt	500	Sections of road snow-blocked in winter.
24.	Magellarë--Struga--Lin 1/	54.0	87.0	2-way	Magellarë--Debar is metalled. Struga--Lin is water-bound macadam	Struga--Lin section 2,000	Subject to snow-blocking near Lin.
25.	Peshkëpijë--Librash 1/	63.3	102.4	Generally 2-way	Metalled	500-1,000	Reported good (3/43). Poor bridges limit capacity. Snow-blocking in winter.
26.	Librash--Korca 1/	63.6	102.9	2-way	Water-bound macadam. Said to be asphalt.	2,000	Some bad bridges may limit load to 4 tons (1940).
27.	Korca--Perat 1/	55.9	90.0	2-way (5.5 m.)	Metalled.	1,000	Fair condition (1940). Subject to snow-blocking.

1/ Detailed description in text.

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SUMMARY

INTERNATIONAL ROADS

No.	Road	Distance Mi.	Km.	Width	Surface	Est. daily cap. in tons	Remarks
				ROADS INTO YUGOSLAVIA			
28.	Scutari--Bar 1/	32.9	53.0	2-way	Metalled		Loose surface beyond frontier. Probably all weather.
29.	Scutari--Podgorica 1/	39.1	63.0	2-way (6-8 m.)	Metalled, reported asphalt to Tuz.	2,000	Good; all weather road.
30.	Kukës--Prizren 1/	ca.20.5	33.0	2-way (6-8 m.)	Metalled; reported asphalt	1,500	Good condition.
31.	Korca--Bitolj 1/	ca.45.6	73.5	Scant 2-way	Metalled	1,500	Loose surface beyond frontier. Subject to snow-blocking beyond Korca Plain.
	See also No. 24.						
				ROADS INTO GREECE			
32.	Korca--Phlorina 1/	54.8	88.2	2-way (4-6 m.)	Metalled, may be asphalt to frontier	1,000	Capacity reduced in wet weather. Snow-blocking in passes.
33.	Perat--Elaig 1/	25.4	41.0	1-way	Probably metalled.		Reported to be in poor condition.
34.	Gjorgucat--Elaig--Ioannina 1/	53.4	86.5	2-way (6-8 m.)	Asphalt to frontier; beyond frontier metalled.		Good condition.
35.	Sarandë--Konispol 1/	31.0	50.0	1-way	Metalled		2-way to Sopik.

1/ Detailed description in text.

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1) Scutari--Durazzo

	Mi.	Km.
Scutari	0.0	0.0
Alessio	25.4	41.5
Vorrë	67.1	109.2
Durazzo	82.6	133.0

The Scutari--Durazzo road is part of a series of roads which run along the coast from the Yugoslavian frontier to Greece, forming one of two principal north-south routes through Albania.

Route. Beyond Scutari, the road crosses the Drin, and follows it over low swampy ground, swerving east toward Kakarrigit Hills to pass through Barbullush (mi. 11.9; km. 19.3) and Kakarriq (mi. 19.0; km. 30.7). Before reaching Alessio, the road recrosses the Drin; beyond, it follows the base of the western hills, avoiding the swampy ground to the east. After climbing over a low saddle (alt. 200 m.) it continues across the Mati through swampy lowlands to Milot (mi. 37.3; km. 60.1), and, in a close succession of curves, to Mamuras (mi. 47.5; km. 76.6). Leaving Mamuras, the road crosses the Droja, continues through wooded country at the foot of steep hills, and, after crossing several tributaries of the Ishm, enters Vorrë. Between Vorrë and Shijak there is at one point a choice of routes; an old one which climbs a steep hill, and a new one which skirts it on flat ground. Both roads seem to be in use. The new one crosses the Arzen River north of the old crossing, and there are good bridges at both places. At about mi. 78.9 (km. 127.0), the road cuts through Rastbul Hill and crosses Arzen Plain to Durazzo.

Notes. This is a two-way road, with an estimated daily capacity of 2000 tons. The surface, widened to an average of six meters, is asphalt. The road lies in level or rolling country all the way. Some curves are found between Alessio and Mamuras; there are no steep grades. The road is apt to be interrupted by floods at numerous points along the Drin between Scutari and Alessio and in swampy regions south of Vorrë.

Important bridges are located at the following points: at mi. 1.2 (km. 2.3) over the Drin (old bridge, recently strengthened); at mi. 25.4 (km. 41.5) over the Drin (2-span, iron, 384.6 ft. (117.5 m.) long, by 49.2 ft. (15 m.) wide, 15-ton capacity); at mi. 36.0 (km. 58) over the Mati (6-span concrete, about 1574 ft. /480 m./ long). Ford about 1.6 mi. (2.5 km.) downstream. The old bridge over the Arzen at mi. 69.2 (km. 111.6) is iron, recently repaired and opened to traffic (5/42). The new bridge, located north of old bridge, is said to be 2- or 3-span, concrete,

Deployment is possible in dry weather at mi. 2.4 - 11.8 (km. 3 - 19), and at mi. 59.0 - 67.7 (km. 95 -109).

2) Durazzo--Valona

	Mi.	Km.
Durazzo	0.0	0.0
Kavajë	12.8	20.6
Lushnjë	33.7	54.2
Fier	54.1	87.1
Zhnpan (Drize)	56.5	91.0
Feras	61.3	98.6
Milfol	69.6	111.9
Valona	79.0	127.2

This is the central section of the vital north-south coastal road.

Route. The road runs along the sandy shore of Durazzo Bay crossing Kaja River to enter Kavajë town. Leaving Kavajë, it heads for Shkumbin River, crossing Darshi River, and running along the foot of the hills beyond as far as Rogozhinë junction. The road crosses the Shkumbin and proceeds across bare eastern spurs of Dushku Hills in alternating ascents and descents; Kneta Terbufi Swamp and Lake lie to the east. From about mi. 29.8 (km. 48) to Lushnjë, the road runs through cultivated land (orchards and fields). Beyond Lushnjë, it follows western slopes of Gurizza Hills to Semeni River (mi. 50.9; km. 82). Leaving the Semeni, the road runs over a marshy plain to Fier (mi. 54.1; km. 87.1), and from there winds among the low northern hills of Peshtan chain to Levan, then crosses more level swampy ground to Feras (mi. 61.2; km. 98.6) on Vijosë River. About 2.4 mi. (4 km.) beyond Vijosë River, the road enters hilly country and climbs over hills to Valona.

Notes. This is a two-way asphalt road, 19.7 - 26.2 ft. (6 - 8 mi.) wide, with an estimated daily capacity of 2500 tons. In January 1943, the condition of the road was reported to be good, and travel at high speed is possible. Short steep ascents and descents and some curves occur south of the Shkumbin River, where the road crosses the easternmost spurs of a chain of hills (Dushku), and between Fier and Feras, where the road crosses the low northern hills of the Peshtan or Mallakaster chain. Reportedly an all-weather road, it is liable to flooding near Semeni and Vijosë Rivers.

Important bridges are located at mi. 4.6 (km. 7.5); at mi. 24.1 (km. 38.8) over the Shkumbin; at mi. 50.6 (km. 81.5) over the Semeni; at mi. 61.2 (km. 98.6) over the Vijosë. The bridge over the Shkumbin is cement, with 5 spans and a total length of 777 ft. (237 m.); the Semeni bridge, probably concrete, is 311 ft. (94.8 m.) long; the Vijosë bridge is of 5-arch concrete structure, 735 ft. (224 m.) long.

Cross-country movement and movement off the road is generally impossible in wet weather. Even in dry weather, it is limited by swamps, and drainage ditches. Some movement west of road should be possible (a) between Kavajë and Shkumbin River, and (b) in the plain between Lushnjë and Kolonjë, and at a few points south of Kolonjë.

Between Durazzo and Rogozhinë, maintenance used to be difficult because the road foundation was poorly constructed. Drainage throughout was extremely poor before the Italian occupation, and may still constitute a weakness of road in spite of improvements.

3) Valona--Sarandë

	Mi.	Km.
Valona	0.0	0.0
Logora Pass	26.5	42.6
Himara	45.5	73.3.
Porto Panormo	52.8	85.0
Piqerras	63.4	102.0
Shën-Vasil	72.7	117.0
Sarandë	82.2	132.8

This is the southern section of the border-to-border coastal road through Albania.

Route. From Valona, the road follows the east shore of the bay, passing through a 656-ft. (200-m.) tunnel around mi. 3.7 - 4.3 (km. 6-7). Entering a flat sandy region at the head of the bay, the road crosses the Dukatit River, mi. 11.3 (km. 18.2), and follows the swampy valley, rising steadily through Dukatit village and Logora village to Logora pass, 3,609 ft. (1,100 m.), through scattered pine woods. The road then crosses a ravine and zigzags steeply down the bare limestone mountain (grades over 10 percent) to Palasa village. It proceeds to Himara across ridges, some bare and some orchard-covered, then descends sharply to Spite Bay and continues at sea level to Panormo Bay. Between this point and Sarande, the road twists in and out of gullies and over hills, rising to 2,953 ft. (900 m.) south of Lukovë, (ca. mi. 65.8; km. 106.4) after which it descends fairly steadily past Gjashtë, and over a bare ridge to Sarande."

Notes. Road is metalled, except for 3-4 miles (6-7 km.) of asphalt outside Valona. Although most of it is wide enough for two lanes of traffic, in villages and a few mountain sections, only one line of cars can pass at a time. This road is believed to have carried heavy traffic during the Albanian campaign and has an estimated daily capacity of 1,000 tons. Sharp curves are fairly numerous, and there are many ascents and descents; grades, however, are rarely very bad, reaching 10 percent or above only in the vicinity of Logora Pass. Landslides frequently block the road, and in winter, snow is likely to cause trouble in Logora Pass.

Bridges and culverts over ravines, gullies, and seasonal streams are numerous, particularly south of Logora Pass. Steep banks are frequent impediments to by-passing. The most important bridge is situated at mi. 11.5 (km. 18.5) over the Dukatit River.

The tunnel at mi. 4.3 (km. 7) can be by-passed on a 1.2-mi. (2-km.) detour believed practicable at least for light traffic.

Movement off the road is generally limited or made impossible by the nature of the terrain. There is intermittently good cover for men on wooded slopes or in sparse vegatation along the road. Very little cover for motor transport can be counted upon. Snow lingers in Logora Pass as late as March.

9) Vorrë--Tirana

	Mi.	Km.
Vorrë	0.0	0.0
Tirana	9.8	15.8

This is an important road between the coastal road and Tirana. The Durazzo--Tirana autostrada (No. 10) is an alternate route.

Route. Leaving Vorrë, the road runs between low hills into the Ishm Valley which it follows to Tirana.

Notes. It is an all-weather asphalt road, two-way, and in good condition. There are few curves or grades. There are only two bridges of any importance: a bridge at mi. 6.4 (km. 10.3) over ravine, and a stone bridge across the Arzen at mi. 8.5 (km. 13.6).

10) Durazzo--Ndroq--Tirana

	Mi.	Km.
Durazzo	0.0	0.0
Pjeshkeza	7.1	11.5
Ndroq	13.3	21.5
Peze e Vogel	14.9	24.0
Tirana	23.4	37.8

This is the Durazzo--Tirana autostrada, and an excellent alternate to the road between these points via Vorrë (Nos. 1 and 9).

Route. The route follows Durazzo--Valona road south to mi. 4 (km. 6.5), where it branches east and rises over coastal hills to Arzen Valley at Pjeshkëza. The road ascends the left bank of the river, to mi. 18 (km. 28.8) where it crosses and follows the tributary valley to Tirana.

Notes. Wide (26 ft.; 8 m.) asphalted road. A bridge at mi. 18 (km. 28.8) is said to be a modern structure. Deployment would be limited by drainage ditches and streams.

12) Scutari--Kukës.

	Mi.	Km.
Scutari	0.0	0.0
Pukë	36.6	59.0
Kukes	ca. 89.2	143.6

This is the Albanian section of the recently completed transverse road through the mountains from Scutari on the Adriatic coast to Prizren in Yugoslavia.

Route. Leaving Scutari, the road crosses the Kiri River skirts Mt. Julani, reaches Vau Dejes, and crosses the Drin River. From here it follows the Gemshic River through very mountainous country, running along the mountain side, at times 328 ft. (100 m.) above the river. At about mi. 28.5 (km. 46) the road descends in a series of switchbacks to the Gemshic Valley floor, crosses the river, and rises abruptly out of the valley. From here it climbs steadily over very rough country to Puke.

Notes. The surface is asphalt, 6-8 meters wide, with an estimated daily capacity of 2,500 tons. Sharp curves and steep grades occur throughout. Grades beyond Puke are undoubtedly steep, particularly over Malit Pass. Specifications for new construction called for a minimum radius of 20 meters on bends and 12 meters on switchbacks; also for a maximum grade of 6 percent, which has almost certainly been exceeded.

Important bridges are located just beyond Scutari over the Kiri; at Vau Dejes (mi. 7.4; km. 12) over the Drin; at mi. 42.8 (km. 69.0) over the Gemshic; at about mi. 86.9 (km. 140) over the Drin; at Kubat e Luma (mi. 90.7; km. 146.3) over the Luma River. The Kiri crossing is dry except in the rainy season, when it becomes torrential and cannot be forded. The first Drin bridge is 695 ft. (212 m.) long; the Gemshic bridge was planned to be 341 ft. (104 m.) long, with a total of 4 concrete spans; the Drin bridge before Kukës is concrete and about 341 ft. (104 m.) long.

Occasional snow-blocking is reported around Puke and in the mountains between Puke and Kukes. Construction of that section of the road was held up by snow.
(35835)

The course of the recently-built Puke"--Kukes section has not been ascertained. An Italian map (1939) shows the road running directly east across two difficult mountain ranges. According to more recent information, however, the road goes north along the Arsit River, then crosses Malit Pass to Spas and follows the Drin south to Kukes.

13) Zalle"--Kruje"--Burele"--Peshkepije"

	Mi.	Km.
Zalle"	0.0	0.0
Kruje"	7.5	12.2
Burele"	30.0	48.3
Lise"	37.9	61.0
Mure"	44.2	71.0
Peshkepije"	59.6	96.0

This is an important but difficult transverse route from the coastal road to Peshkepije". The exact route and status of construction east of Mure" are not known.

Route. The road from Zalle" ascends through low coastal hills to Kruje". Beyond Kruje", the road swings sharply north to enter the narrow water gap of Droje" River. Emerging from the gap, it follows the Zeze" River to its headwaters, then crosses Shtames" Pass, 4,032 ft. (1,228 m.), at mi. 19.8 (km. 32.0). Descending, the road enters the valley of the Germanit River and winds along mountain slopes to Burele". Leaving Burele", the road crosses Mati River at mi. 31.5 (km. 50.8), and ascends its tributary valley to Lise". At mi. 40.3 (km. 65.0) the road crosses the divide to Mure" in the Lysja Valley (mi. 44.1; km. 71). The course of the road is not known beyond Mure", but probably it continues in the Lysja Valley to Peshkepije".

Notes. The road to Burgajet (mi. 35.5; km. 57.1) is two-way, metalled, and reported to be in good condition. The Mure"--Peshkepije" section is believed to be completed; the type of surface and condition are not known. The road crosses many small streams; the new section probably has a number of timber structures. A large concrete bridge over Black Drin at mi. 54.6 (km. 88) is reported under construction (11/42). This structure, 524 ft. (160 m.) long, with 5 arches each measuring 98 ft. (30 m.) is to replace the pontoon bridge.

Deployment is generally impracticable; limited movement from the road is possible between mi. 26.5 and mi. 35.5. (km. 42.6 -- 57.1). A thick beech forest, not accessible to motor transport, may provide cover for troops on the section east of Burele". Snow-blocking occurs in Shtames" Pass.

(14) Tirana--Shtëpenz

	Mi.	Km.
Tirana	0.0	0.0
Priskës Pass	3.1	15.0
Klos	27.9	45.0
Buellit Pass	31.2	50.2
Lepurak	37.9	61.5
Shtëpenz	45.9	74.5

This road, probably still under construction, provides a relatively direct route from central Albania to the Peshkepije--Librash road, and to Debar in Yugoslavia.

Route: From Tirana the road runs east across the Tirana Plain, and climbs steeply to Priskës Pass (3,084 ft.; 940 m.). East of the pass the road enters the tributary valley of the Arzen River, and then crosses a low divide to Klos in the Mati Valley. At Klos the road ascends the tributary valley of the Mati to Buellit Pass at mi. 31.2 (km. 50.2), descends, and follows the Bulcizës Valley to Shtëpenz.

Notes: The width and type of surface are not known. Bridges probably are temporary structures. Steep grades are encountered in pass sectors. Deployment is possible only in the area near Tirana. Passes are subject to snow-blocking in winter.

(15) Tirana--Elbasan.

	Mi.	Km.
Tirana	0.0	0.0
Elbasan	34.7	56.0

This is the most direct route between these two points.

Route. Leaving Tirana, the road climbs gradually along bare mountain slopes to Arzen River Valley. It crosses the river, then twists and turns up the steep slopes of the Krrabë Mountains to the pass (2,526 ft.; 770 m.). Descending precipitously for the first 5 miles, the road then continues gently down through hills dotted with olive trees to the Elbasan Plain.

Notes. The road is asphalt, two-way; estimated daily capacity is 2,000 tons, but there is some doubt as to whether all bridges could stand up under constant heavy traffic. The road is fairly difficult; where it crosses Krrabë Pass it is characterized by steep grades (sometimes over 10 percent on Elbasan side) and sharp curves. In winter, the mountain streams become torrential, frequently sweeping away bridges, while in the lowlands near Elbasan there is danger of flooding. Landslides are a common interruption. Snow and fog cause some difficulty on Krrabë Pass. A daily Durazzo--Korca bus followed this route.

"The wooden bridge over the torrent on the descent from Krrabe" Pass and the stone bridge over the Zaranike" River are said to be vulnerable. The latter, "though widened, was still one-way in August 1940. The Zaranike" cannot be forded at this point.

The small bridges and culverts found between Iba and the Elbasan Plain are usually wooden.

Even in dry weather, movement off the road is generally quite restricted except in the Elbasan Plain. Flooding is probably no longer a problem in the plain since embankments have been built along the river.

(16) Elbasan--Librash.

	Mi.	Km.
Elbasan	0.0	0.0
Librash	15.5	25.0

This road is a section of the" route from Durazzo through central Albania to Peshkepije" and Korca on the eastern frontier. It is the only road between Elbasan and Librash, both important junctions.

Route. From Elbasan the road runs through the flat cultivated Shkumbin River Basin to Labinot, mi. 4.9 (km. 7.9), then enters Shkumbin defile and continues for about 11 miles (18 km.) to Librash along a narrow passage between the mountain and the Shkumbin River.

Notes. The road has reportedly been widened to 19.7 - 26.2 ft. (6-8 m.); however, there are indications that it is still one-way at several points. Its surface is waterbound macadam, probably surface-treated. Average daily capacity is estimated at 2,000 tons, in spite of fact that in 1940 weak bridges limited the weight of trucks using road to 4 tons.

The most important bridge is a concrete structure located at mi. 12.6 (km. 20.2) over the Shkumbin. Two other bridges are found at mi. 7.6 (km. 12.3).

The whole Shkumbin defile is vulnerable, particularly at mi. 8.1 (km. 13.0), where it runs through a narrow gorge; at mi. 11.8 (km. 19), where the road is supported by heavy embankments and runs under steep cliffs; at mi. 12.5 (km. 20.2), where it crosses the Shkumbin; and from mi. 12.5 (km. 20.2) to mi. 15.5 (km. 25), where it is subject to frequent landslides from the steep mountain above it.

The stretch of road around mi. 11.8 (km. 19) used to be one-way, with turnouts, and has probably not been widened.

Some movement off the road is possible on the Elbasan Plain in dry weather.

(18) Elbasan--Korca.

	Mi.	Km.
Elbasan	0.0	0.0
Shtepan	11.9	19.3

	Mi.	Km.
Gramsh	22.1	35.6
Moglicë	42.5	68.4
Maliq	57.7	93.0
Korcë	67.7	109.1

This road, said to be completed, is the shortest connection, but a difficult one, between Elbasan and Korca.

Route. The road crosses the Shkumbin River, follows its left bank to mi. 7.1 (km. 11.5) and then goes over a low divide to Shtepan in the Devoll Valley. The road ascends Devoll Valley through difficult terrain, leaves the valley at mi. 39.9 (km. 64.3), and climbs Shenepremtës Pass (4,970 ft.; 1,514 m.) to Moglicë. At m. 46 (km. 74.5) the road reenters Devoll Valley, and follows it to Maliq on Korca Plain.

Notes. The road is two-way, metalled. The Moglicë--Maliq section is said to be still under construction. Built for military purposes, the road has long been closed to civilian traffic. The bridge over the Shkumbin at mi. 1 (km. 1.6) is an old stone structure, 777.5 ft. (237 m.) long, and reported to be weak. Many small bridges are said to have been built over small streams. Fording of streams generally is not possible. Movement off the road is practicable in Elbasan Plain, and, in dry weather, between Maliq and Korca.

(19) Lushnjë--Berat--Perat	Mi.	Km.
Lushnjë	0.0	0.0
Poshnjë	14.6	23.5
Berat	24.2	39.0
Kelcyrë	61.6	99.2
Premet	73.3	118.4
Perat	92.0	148.5

This is an important transverse road from the coast to Perat on the Greek frontier. The Kelcyrë--Perat section of this road is a link in the road connection between Valona and Korca.

Route. From Lushnjë the road crosses the plain, skirting low hills to mi. 4.3 (km. 7.0). It then runs south over the open plain to mi. 8.0 (km. 13.0) where it crosses the Semeni River, and enters the undulating terrain of Beratit Valley. It continues on the west side of the valley to Poshnjë, crosses Beratit River at mi. 17.0 (km. 27.5), and climbs gradually to Berat. At Berat, the road recrosses the Beratit River, then ascends a steep slope and runs south on a high ridge. It goes through three successive passes (2300-2900 ft.) before descending. After descent, at mi. 52.1 (km. 84.0), into the Desnice Valley, the road follows the left bank of the river to Kelcyrë where the Desnice Valley opens into the Vijosë Valley. Ascending the Vijosë Valley, the road crosses the river at Premet, and again at mi. 78.2 (km. 126) and continues to Perat.

Notes. The road is two-way. The Lushnje"--Poshnje" section is said to be asphalted; the Berat-Perat section is metalled. The daily capacity of road is estimated at 1500 tons, but may be affected by bad weather in the Berat--Perat section. The bridge at mi. 78.2 (km. 126) is an old Turkish 3-arch stone bridge, and narrow. Deployment is good in dry weather to Berat; beyond that point it is very limited. Cover is sparse. Valona--Gjorgucat (Nos. 21,22) is the superior road to Greece. To reach Korca by the alternate route, traffic would have to travel into Greece by way of the Gjorgucat--Ioannina road (No. 34) as far as Elaig, and then go north to Perat.

20) Valona--Tepelenë.

	Mi.	Km.
Valona	0.0	0.0
Vajzë	19.0	30.6
Livadit Pass	23.5	38.0
Dukaj	43.4	70.5
Tepelenë	50.8	81.7

This is the only road from Valona into the interior; at Tepelenë it connects with the road to Korca and the two principal roads into Greece.

Route. Beyond Valona, the road climbs over a range of low hills into the Shushicë Valley, where it crosses the river and continues along its east bank to mi. 12.7 (km. 20.5). Here it crosses the Kamalija River, and winds sharply up the Griba Range, through Vajzë village, to Livadit Pass, 1,772 ft. (539 m.). From this point the road twists with many hairpin bends and switchbacks up and down ridges, reaching an elevation of 1,972 ft. (600 m.) at mi. 27.5 (km. 44.1). Descending in steep sharp curves to Mamalijë, mi. 29.5 (km. 47.3), the road runs high on the southern slopes of the Vijosë Valley. It crosses low divides at mi. 33.3 and 41.8 (km. 53.4 and 67.9) before it enters Tepelenë.

Notes. The road is generally two-way with a few one-way stretches. It is asphalted, but may not be in good condition (3/42). Steep grades (up to 12 percent) and very sharp curves occur throughout. Hairpin bends are found at Vajzë, on the descent to Mamlijë, and beyond Sinanj. Capacity of road has been tentatively estimated at 1500 tons a day.

There are numerous small bridges and culverts. The most important bridge is over the Shushicë River at Drashovicë, mi. 6.3 (km. 9.9). It has one span 98.4 ft. (30 m.) wide, and the roadway is 16.4 ft. (5 m.) wide. A rather weak, narrow, alternate bridge which carries light railroad track as well as road, can be reached by the left fork at Qisbardhë (mi. 3.7; km. 6.2).

Other bridges have been observed as follows: mi. 12.8 (km. 20.5) over the Kamalijë; mi. 31.8 (km. 51.4) over the deep valley of a Vijosë tributary, length ca. 110 ft. (33.5 m.), width ca. 20 ft. (6.0 m.); mi. 39.3 (km. 63.3) over the Vijosë tributary, length ca. 80 ft. (24.3 m.), width ca. 20 ft. (6.0 m.); mi. 39.3 (km. 63.3) over the Vijosë tributary, length ca. 80 ft. (24.3 m.) width ca. 20 ft. (6.0 m.); mi. 46.8 (km. 75.2) over the tributary of Lumi Bencës; mi. 50 (km. 80.3) over Lumi Bencës at the entrance to Tepelenë, two bridges: (a) an old Turkish bridge with a single high masonry arch, or (b) a straight bridge about 50 yards (45.7 m.) north, probably a new emergency bridge.

Movement off the road is generally difficult or impossible.

21) Tepelenë--Gjorgucat.

	Mi.	Km.
Tepelenë	0.0	0.0
Gjinokastrë	18.0	29.0
Gjorgucat	30.5	49.0

This is part of the main road from Albania into Greece. An alternate route runs from Tepelenë to Perat via Këlcyrë; but the Tepelenë — Gjorgucat road is the better of the two.

Route. From Tepelenë, the road follows the Vijosë for about 1.8 mi. (3 km.) to the Dhrino River. Passing marshy ground on the east it enters the Dhrino Valley which it follows, winding along the narrow strip between river and mountains. At mi. 8.8 (km. 14) the valley widens. The road continues along its barren floor past Gjinokastrë, which lies on a hillside west of road, to Gjorgucat.

Notes. This is a good two-way, all-weather road, built on stone base. It is probably metalled, but there are reports of asphalt surface. Beyond the frontier, the road is macadam, also two-way, but in poor condition. Capacity of road has been estimated at 1500 tons a day. It is very winding and steep in places; some 10 percent grades are reported between Tepelenë and Gjinokastrë.

Since the road remains on one side of the Dhrino, all crossings are over fairly minor tributary streams. The only important bridges are a stone bridge at mi. 12.5 (km. 20) over the Kardiquit River, and the iron Lekl Bridge at mi. 3 (km. 5). Two other fairly important bridges are located at mi. 34 (km. 55) over the tributary of the Dhrino; at mi. 35 (km. 56.6) over the Kseria. These are stone, repaired with timber, and are of limited capacity.

Restricted movement off road is possible almost throughout in dry weather. In the Dhrino Valley it is limited by foothills; between Gjinokastrë and Gjorgucat it is practicable to the east (restricted movement is possible to the west).

21 a) Tepelenë--Këlcyrë.

	Mi.	Km.
Tepelenë	0.0	0.0
Këlcyrë	5.4	8.8

This road is an important tie between the Valona -- Tepelenë -- Gjinokastrë -- Gjorgucat (Nos. 20, 21) and the Lushnjë -- Berat -- Perat (No. 19) roads. It is used by traffic going from Valona via Perat to Korca.

Route. The road follows the left (north) bank of the Vijosë River to Këlcyrë.

Notes. The road is two-way, and metalled. The valley is narrow, and becomes a gorge near Këlcyrë.

22) Sarandë--Gjorgucat.

	Mi.	Km.
Sarandë	0.0	0.0
Gjashtë	2.2	3.7
Bamatat	8.7	14.0
Delvinë	11.1	18.0
Murzinës Pass	24.0	38.5
Gjorgucat	27.6	44.1

An important transverse route from the port of Sarandë to Gjorgucat.

Route. The road runs north out of Sarandë, climbs steep hills east of the city, and enters the valley of the Kalasës River. At mi. 4.9 (km. 8) the road crosses the river, runs east to Bamatat, and thence to Delvinë. Beyond Delvinë the road climbs and winds along steep mountain-sides to the Delvinë gap 1,607 ft. (509 m.) at mi. 12.7 (km. 20.6). The road loses altitude after leaving the gap but at mi. 20.2 (km. 32.5) it begins the ascent to Murzinës Pass (1870 ft.; 569 m.). By means of hairpin bends, the road descends into the Dhrino Valley.

Notes. The road is two-way and metalled. Steady climbs are encountered east of Delvinë. The temporary bridge over Kalasës is said to have been replaced by a structure designed to take 12 tons. Deployment is possible near Bamatat and from that point to Delvinë. Cover is sparse.

23) Kukës---Peshkëpijë.

	Mi.	Km.
Kukës	0.0	0.0
Bicaj	8.0	13.0
Bellice	17.4	28.0
Peshkëpijë	27.3	44.0

This road is an important link in the eastern corridor road connecting Kukës, Korca, and Perat. Kukës, the northern terminus of this road, lies on the Scutari--Prizren, Yugoslavia road.

Route. The exact itinerary of this road is not known. From Kukës to Bicaj, the road crosses the Kukës Basin. South of Bicaj, the road is confined to the right bank of the Black Drin River, and runs below steep slopes to Bellice. At Bellice, the valley widens into Peshkëpijë Basin.

Notes. This road has been under construction since 1940, and is reported as asphalted, probably two-way. Only Kukës--Bicaj and mi. 22.9 (km. 37.0)--Peshkëpijë sections are known to be completed, but the entire route has been reported to be capable of handling military traffic. Daily capacity is estimated at 500 tons.

The road crosses seven tributaries of the Drin, but not the Drin itself.

Deployment is generally not practicable along this road. Movement from the road may be possible locally on the Bellice--Peshkepijë section. There are no suitable alternates to this road; the route on left bank of Drin is a track and cannot take motor vehicles.

24) Magellarë--Struga--Lin

	Mi.	Km.
Magellarë	0.0	0.0
Frontier	2.2	3.5
Debar (Yugoslavia)	6.8	11.0
Struga (Yugoslavia)	38.5	62.0
Frontier	50.3	81.0
Lin	54.1	87.0

This road, most of which lies in Yugoslavia, is an alternate and somewhat shorter route to the Magellarë section of the Peshkëpijë--Librash--Korca road. Traffic in Yugoslavia from Peshkëpijë and Elbasan converges at Struga, from which point a road runs east to Resan (Yugoslavia) on the Korca--Bitolj road (No. 31).

Route. At Magellarë the road enters Debar Basin, and traverses a moderate terrain to mi. 10.6 (km. 17). Leaving the Debar Basin, the road enters the Black Drin Valley, and hugs the left bank of the river, pursuing a winding course below steep slopes to about mi. 30.8 (km. 49.5). South of this point the valley widens and merges into the Ohridsko Plain. The road approaches Struga across extensive marshes bordering Lake Ohridsko. At Struga, the road skirts the lake, climbs steeply to Thanës Pass (3,054 ft., 929 m.) and descends by means of serpentines to Lin.

Notes. The Magellarë--Debar section is two-way, metalled; the Struga--Lin section is two-way, waterbound macadam. The daily capacity of the latter section is estimated at 2,000 tons. Thanës Pass is subject to snow blockade. Deployment from the road is impracticable at most points. The marsh at Struga prevents movement from the road. Thick forests in Drin Valley, though suitable for concealing troops, are inaccessible to motor transport.

25) Peshkëpijë--Librash

	Mi.	Km.
Peshkëpijë	0.0	0.0
Magellarë	11.8	18.0
Shtëpenz	17.0	27.5
Strikcan	25.6	41.2
Ostren-i-Vogl	30.9	49.8
Llonj	50.2	80.9
Librash	63.3	102.4

This road is part of the Kukës--Korca--Perat road. It connects the termini of three transverse roads: Peshkëpijë, terminus of the road from Krujë via Burelë (No. 13); Shtëpenz, of the road from Tirana via Klos (No. 14); Librash, of the main road from Elbasan (No. 16).

Route. The road from Peshkëpijë follows the Black Drin Valley, and runs along the lower slopes of mountain range. At Magellarë it turns to the left (west), crossing the Black Drin at mi. 13.7 (km. 22.1), then south to ascend the Zali Valley to Shtëpenz. At mi. 26.7 (km. 43) the road turns west and ascends the tributary valley of the Zali to a pass (400 ft.; 1219 m.) at about mi. 51.8 (km. 83.5). It then descends rapidly from the pass into the Rapon Valley; crosses the Rapon River at mi. 56.4 (km. 90.9), and continues along wooded slopes to Librash.

Notes. This road, formerly neglected where it lay close to Yugoslav frontier, has been widened and metalled to handle two-way traffic. It is winding and has steep grades between Magellarë and Llonj. Daily capacity is estimated at 1000 tons. The bridge over the Black Drin River is a temporary structure; there are numerous small wooden bridges over ravines and mountain torrents. Movement off the road is generally impossible; cover is only locally accessible. Between mi. 30.9 and 35.4 (km. 49.8 and 57.0) the road is subject to snow-blocking. Streams are deeply intrenched in this area, and usually cannot be forded. The only practicable alternate road, branches off at Magellarë, runs through Yugoslavia via Debar and Struga, and enters Albania at Lin. (See Route Description No. 24.)

26) Librash--Korca.

	Mi.	Km.
Librash	0.0	0.0
Qukës	20.9	33.7
Thanës Pass	25.2	40.7
Pogradec	40.0	64.5
Cerave	45.3	73.0
Sovjan	53.6	86.4
Korca	63.3	102.9

This road is an important section of the Kukës--Korca--Perat road. It provides the best route from Elbasan to Korca, and by a road branching off at mi. 25.2 (km. 40.7), the shortest route between Elbasan and Yugoslavia.

Route. The road ascends the Shkumbin Valley, staying on right (north) bank of the river. Beyond Qukës, it crosses the Shkumbin twice, and then ascends the valley of the Langaica River, tributary of the Shkumbin. At mi. 23.4 (km. 37.8) it crosses the marshy Kododesh Basin and begins a steep, winding ascent to Thanës Pass, 3,002 ft. (915 m.). Descent from the pass is abrupt, and the road winds through rugged terrain, and then through marshy lowlands in the vicinity of Lin (mi. 45.3; km. 73) on Lake Ohridsko. From Lin, it runs south along the foot of steep slopes bordering the lake to Pogradec. On leaving Pogradec, the road traverses flat marshy areas, and climbs over a low pass (mi. 41.0; km. 66.1) to Cerave. Beyond Cerave it crosses another ridge, and at about mi. 48.4 (km. 75) descends into the Korca Plain. From this point it continues over level, and in places marshy, ground to Sovjan. After crossing the Devoll River (mi. 53.6; km. 86.4) The road runs over slightly rolling terrain to Korca.

Notes. The road can handle two-way traffic. The surface is waterbound macadam. Reports that it is asphalted are probably true as this road is used for shipment of chrome ore mined at Pogradec. Capacity of road is rated at 2,000 tons daily. There are many bridges over small streams. Deployment from the road is possible at points between Librash and Lin. Some movement off the road is practicable in the Pogradec area, and considerable cross country travel is possible in the Korca Plain during dry weather. Thanës Pass is subject to snow blockade.

27) Korca--Perat.

	Mi.	Km.
Korca	0.0	0.0
Dooran	4.7	7.7
Qarrit Pass	10.5	16.9
Erseke	24.2	39.1
Borove	27.8	44.8
Kabash	43.3	69.8
Leskovik	47.5	76.6
Perat	55.9	90.0

This road provides the only connection between the Kukës--Korca road (Nos. 23, 24, 29, 25, and 26) and the Perat--Elaig (No. 33) road into Greece.

Route. The road runs south out of Korca over the Korca Plain to Dooran. South of Dooran, it crosses many short streams, and at mi. 8.7 (km. 14) begins the steep ascent to Qarrit Pass. The steep winding descent from the pass through sparsely-wooded country leads to the Kolonje Plateau, where the road crosses three deeply intrenched streams. It traverses fairly level terrain to Borove, then descends to cross Lengatica River (mi. 37; km. 59.7). The road continues southward along steep slopes of the mountain forming the frontier; and crosses Hazerit Pass (3,600 ft.; 1097 m.) at mi. 41.9 (km. 67.4) to reach Kabash. Long winding descents and frequent dips across transverse valleys lead to Perat.

Notes. This road is two-way, metalled, and reported to be in good condition. Daily capacity is estimated at 1,000 tons. Bridges are said to be of reinforced concrete construction, and capable of taking any load. Sharp bends and steep grades are encountered between mi. 8.7 and 43.5 (km. 14 and 70). Hazerit and Qarit Passes are frequently snow-blocked in winter. Some deployment is possible in the Kolonje Plateau area, though limited by intrenched stream beds. Movement from road is practicable in the Korca Plain. There are no practicable alternates to this road.

28) Scutari--Bar (Yugoslavia)

	Mi.	Km.
Scutari	0.0	0.0
Murican	9.9	16.0
Bar	32.9	53.0

This is an important road to the port of Bar, which is a terminus of the trade route from Ruse, Sofia, and Skoplje.

Route. The road runs west of Scutari, crosses Bojana River at mi. 1.6 (km. 2.5), and continues through marshy terrain, traversing scattered patches of woodland as it approaches Murican. It then follows the Medurjec Valley to Krute (mi. 22.9; km. 37.0) and continues along western slopes of the coastal mountains, winding considerably near Dobra Voda, mi. 29.2 (km. 47.0). From there it turns north to Stari Bar, then west to the port of Bar.

Notes. The road is two-way, metalled. It is probably in fairly good condition, at least as far as Murican. In 1942 considerable sums of money were devoted to its repair up to that point. According to latest reports (1941), surface from Murican to Bar is loose and in poor condition. Many bends and some steep grades (up to 7 percent) occur between mi. 12 and 30 (km. 20 and 48).

A 541-foot (165-meter) iron bridge over the Bojana constitutes a vulnerable point, since the river cannot be forded here. The low capacity of the wooden bridge at Murican limits use of the road in Yugoslavia.

Movement off the road is feasible only in dry weather, when it may be possible between mi. 6.2 and 14.3 (km. 10 and 23), mi. 27.9 and 32.9 (km. 45 and 53). Elsewhere it is difficult.

29) Scutari--Podgorica (Yugoslavia).

	Mi.	Km.
Scutari	0.0	0.0
Koplik	12.8	20.6
Han I Hotit	21.7	35.0
Yugoslav Frontier	22.9	36.9
Tuz	32.3	52.0
Podgorica	39.1	63.0

This is the best route into Yugoslavia from the Adriatic coast.

Route. For a few kilometers north of Scutari, the road is raised on embankments to cross marshy ground. It continues over the plain and then across gentle, scrub-covered slopes to Koplik. From there it follows the flat valley to Han I Hotit, winding into the hills at mi. 22.4 (km. 36). Near Pogkum, at mi. 28.0 (km. 45), it descends, continuing for a few kilometers along the marshy shore of Lake Scutari. At Tuz it climbs gradually to the Podgorica Plain and Podgorica.

Notes. The road is two-way (19.7-26.2 ft.; 6-8 m.), asphalted as far as Tuz (2/43), with an estimated daily capacity of 2,000 tons. There are no bad grades or curves. It is said to be all-weather road.

Bridges on Albanian section of road are located at mi. 4.8 (km. 7.7; over the Vraki); mi. 8.9 (km. 14.3; over the Rrijolli); mi. 11.2 (km. 18; over the Benushi), mi. 14.3 (km. 23; over the Pron i That). Their destruction would mean temporary delay at least in winter, when fording these streams is very difficult. Beyond the frontier, bridges over the Licherri Hotit, mi. 27.3 (km. 44), and the Cijevna, mi. 35.4 (km. 57), are vulnerable; the Cijevna River cannot be forded at this point.

In dry weather, movement off road and across country is generally possible, though limited by swampy ground for the first few kilometers outside Scutari and by Benushi Torrent and Pron i That Rivers.

30) Kukës--Prizren (Yugoslavia).

	Mi.	Km.
Kukës	0.0	0.0
Frontier	10.0	16.0
Prizren	20.5	33.0

This road, recently improved, provides the best connection between northeastern Albania and southern Yugoslavia. Kukës is the eastern terminus of an improved and, in part, newly constructed road from Scutari (No. 12).

Route. Leaving Kukës, the road ascends the narrow valley of the White Drin River. It hugs the south bank of the Drin, crosses the Luma River at mi. 1.8 (km. 3), and streams at mi. 4.3 and 6.5 (km. 7 and 10.5). At the Yugoslav frontier, the gorge widens to a broad valley; the road leaves vicinity of river, and continues over moderate terrain to Prizren.

Notes. The road is two-way, metalled, and in good condition. Recent reports state it has been asphalted. Although this road was built according to Italian specifications, there probably are sharp curves and heavy grades between Kukes and the frontier. The daily capacity of the road has been estimated at 1,500 tons. Deployment from road is not possible between Kukes and the frontier; limited movement from the road is possible near Prizren. The deciduous forest in this area may provide cover for troops in summer.

31) Korca--Bitolj (Yugoslavia).

	Mi.	Km.
Korca	0.0	0.0
Dishnice	3.1	5.0
Pijese	6.2	10.0
Gorice	22.1	35.6
Frontier	25.8	41.5
Carev Dvor	40.8	65.6
Bitolj	45.7	73.5

This road affords the only good connection between the Korca Plain and Bitolj (Monastir) in Yugoslavia,

Route. At mi. 8.1 (km. 13) the road leaves Korca Plain and winds through mountainous country to the Zvede Pass, 2,800 ft. (853 m.). It continues along the eastern slopes of Mal i That above Lake Prespansko, crossing a number of streams which drain into the lake. The road climbs over Previtt Pass, 7,286 ft. (2,221 m.), at mi. 15.5 (km. 25) and then descends to run along the shore of the lake at the foot of steep slopes. At mi. 38.5 (km. 62) the road enters the Resan Plain and continues to Carev Dvor. Leaving the Resan Plain the road climbs low pass at mi. 46.6 (km. 75), and enters the wide valley leading to Bitolj.

Notes. The road from Korca to Resan is a two-way, metalled surface in fair condition. The Resan-Bitolj section is two-way and metalled. Daily capacity is estimated at 1,500 tons. There are numerous bridges, the larger reported to be of concrete construction. Sharp curves and steep gradients are encountered between mi. 8.1 (km. 13) and mi. 32.3 (km. 52). Deployment is possible near Korca and in the Resan Plain; elsewhere it is extremely limited. Tree cover is quite inaccessible. From miles 8.1 (km. 13) to miles 38.5 (km. 62) snow-blocking may be expected from about December until March. There are no practicable alternates to this road.

32) Korca--Phlorina (Greece).

	Mi.	Km.
Korca	0.0	0.0
Bilishtë	17.7	28.4
Frontier	23.2	37.3
Phlorina	54.8	88.2

This is the best route from the Korca Plain to Phlorina (Greece) and thence to Thessaloniki.

Route. The road branches to the southeast from the Korca-Bitolj road (No. 31) at mi. 71 (km. 12.1). The road ascends the

Devoll Valley, crossing tributary streams at mi. 11.2 (km. 18), at mi. 12.1 (km. 19.5) and the Devoll River at mi. 13 (km. 21). Beyond Bilishtë, the road becomes winding, turns abruptly to the northeast and ascends the Kapeshtice Valley, following it across the frontier to a pass near Vatokhorion. The road ascends the Leivadopotomos Valley and crosses the Pisodori Pass (4504 ft.; 1373 m.) at ca. mi. 42.3 (km. 68), to the Phlorina Valley.

Notes. The road to the frontier is two-way, asphalt-surfaced, and reported to be in good condition. In Greece, the road is two-way, metalled. Capacity of the road has been estimated as 1,000 tons daily. Grades in Pisodori Pass sector (mi. 36-49.7; km. 58-80) range from 5 to 7 percent. Deployment is possible in the Devoll Valley as far south as Bilishtë. Intermittent blocking by snow may be expected in the Pisdori Pass between December and March. The only alternate to the Korca--Bilishtë Section is a difficult road leading south and southeast from Korca to Bozhigra and then north to Bilishtë.

33) Perat--Elaig (Greece).

	Mi.	Km.
Perat	0.0	0.0
Frontier	0.6	1.0
Elaig	25.5	41.0

At Elaig this road joins the Gjorgucat--Ioannina road (No. 34), and provides the most direct connection between Korca and western Greece.

Route. The road crosses Sarantaporos (affluent of Vijosë River) at about mi. 0.6 (km. 1), and the Acos River at mi. 2.8 (km. 4.5). It winds in and out of lateral slopes of Voidokates Valley to mi. 23.6 (km. 38), where it crosses the divide to Elaig in Gormos Valley.

Notes. The road is winding, mostly single-lane and rough. Deployment would be very limited. Bridges at mi. 0.6 and 2.8 (km. 1 and 4.5) are said to have been demolished and replaced by timber structures.

34) Gjorgucat--Elaig (Greece)--Ioannina (Greece).

	Mi.	Km.
Gjorgucat	0.0	0.0
Kakavi	5.9	9.5
Elaig	33.9	54.5
Ioannina	53.7	86.5

This is the main road from southern Albania into western Greece. Gjorgucat, the starting point of the itinerary, is the junction of roads from Valona (Nos. 20, 21) and Sarande (No. 22). At Elaig, in Greece, the road from Perat (No. 33) joins the road to Ioannina.

Route. The road runs southeast from Gjorgucat, staying on the west side of the Dhrino Valley, about 2 km. from river. It crosses the stream at mi. 3.7 (km. 6.0) and the Kseria River. Moderate grades lead to Kakavi on the frontier. At mi. 5.3

(km. 8.5) the road crosses the Phitoki River, the valley narrows, and the road continues through increasingly rugged terrain to Elaig in the Gormos Valley. From Elaig, the road runs southeast along the base of the mountain over marshy terrain to Ioannina.

Notes. Gjorgucat--Kakavi is a two-way, 19.7 - 26.2 ft. (6-8 m.), road, probably asphalted. Kakavi--Ioannina is also two-way, metalled, and kept in good repair.

Limited deployment is possible between Gjorgucat and Kakavi. Flooding of the terrain adjacent to the road is probable during the rainy season near Ioannina. Cover is sparse. Bridges at mi. 3.7 (km. 6), mi. 4.7 (km. 7.5), and mi. 5.3 (km. 8.5) are reported to have been damaged, and repaired with timbers.

35) Sarandë--Konispol.

	Mi.	Km.
Sarandë	0.0	0.0
Sopik	19.0	30.5
Konispol	31.0	50.0

This road branches south from the Sarande--Gjorgucat road at mi. 6 (km. 9.6) and provides a connection with Konispol on the Greek frontier, about 2 mi. (3.1 km.) inland from the Adriatic coast.

Route. For Sarandë to mi. 6 (km. 9.7) see route description No. 22. The Road runs on the west side of the valley and crosses streams at mi. 8.7 and 16.2 (km. 14 and 26). At Sopik, the road continues on slopes above the valley floor, crosses the Paola River at mi. 23.3 (km. 37.5) and climbs steeply to Konispol at the head of the valley.

Notes. The road is two-way to Sopik; from Sopik to Konispol one-way, with occasional widenings. The type of surface is not known. There is no positive information that the track from Konispol to Sagiada (Greece) has been widened or improved. Deployment from the road is possible for a 3-mi. (4.8-km.) stretch south of Sopik. Near Konispol the terrain is rugged, and movement from the road is very limited.

APPENDIX I. ROADS AND TERRAIN

The roads of Albania can be classified according to their relation to adjacent terrain. The following types are shown on the insert on Map 2599:

1) Roads across open plains (lake, coastal, or river).

2) Roads along narrow river valleys.

3) Roads fringing base of highlands.

4) Roads across hill and low mountain terrain.

5) Roads across high mountain terrain.

1. Roads Across Open Plains (Lake, Coastal Plains, or River Plains).

Description: roads straight or moderately straight; many roads are on low fills and stand slightly above level of the plain; much of area adjacent to road subject to flooding and water-logging; some stretches may deteriorate badly in wet season; roads cross small water channels over culverts, larger channels over causeways and bridges.

Deployment: easy where and when ground is dry; many dry-season trails and primitive wagon tracks lead off main roads.

Areas: many stretches in Adriatic coastal plains, east and south of Lake Scutari, north of Lake Ohridsko, and in the Korca Basin.

2. Roads Along Narrow River Valleys.

Description: roads wind according to patterns of stream valleys they follow; road lies between low land or stream on one side and valley-side slope (usually steep) on other; where river plain is wide road may leave stream-side and follow firmer outer margin of plain; road fill and often road itself may be subject to flooding; tributaries to master stream are crossed by culverts or small bridges; flash run-off of tributaries may destroy bridges.

Deployment: restricted up-slope by mountainous terrain and down-slope by stream and marginal marshes; primitive trails for foot soldiers, especially up tributary valleys.

Areas: many river course routes through high mountain, low mountain, and hilly terrain.

3. Roads Fringing Base of Highlands.

Description: roads lie between flat land of extensive lake, coastal, or river plains, or sea or lake on one side and lower slopes of uplands on the other; roads follow firmer up-slope margins of plains and are generally above reach of floods; at streams draining the upland slopes roads swing up-stream for narrow bridge crossings while trails descend to lowlands or shore for best fording sites.

Deployment: generally good down-slope where and when ground is dry; up-slope from road usually good for foot troops, some local stretches of steep slope; many dry-season trails and tracks into lowlands, and trails up tributary valleys into uplands.

Areas: important routes overlooking the Adriatic coastal plains, Bay of Valona, and Corfu Channel, western shores of Lakes Ohridsko and Prespansko, and stretches of the Black Drin corridor valley.

4. Roads Across Hill and Low Mountain Terrain.

Description: roads curve to preserve low gradients, in some places following the contour of hillsides, in other places curving up slope to cross low divides; most of curves are rather open in rounded terrain of moderate relief; streams are crossed by short, rather high bridges.

Deployment: poor for heavy mechanized equipment, fair to good for light equipment and foot soldiers; many trails and primitive wagon tracks lead off into the hills.

Areas: important stretches on the Bar-Scutari, Valona-Berat, Tirana-Elbasan routes.

5. Roads Across High Mountain Terrain.

Description: mountain roads through areas of strong relief; recently developed roads preserve moderate gradients by means of zig-zag ascents and hairpin turns; roads commonly incised in steep sides of mountain walls for gorges; locally roads pass through defiles into isolated mountain basins.

Deployment: movement of mechanized equipment confined to roads; primitive trails for foot soldiers in many parts of mountain belt.

Areas: stretches on every road crossing the mountain belt of Albania.

PROVISIONAL EDITION

RESTRICTED

ALBANIA
RAILROADS

0 5 10 20 30 40
MILES

0 5 10 20 30 40
KILOMETERS

Reliability Code: 2B – 2B – 2

Standard gauge railroad probably completed or nearly completed but not in operation.

Railroad reported under construction.

Railroad once reported under construction but probably abandoned.

Narrow gauge railroad including Decauville lines.

Decauville lines probably abandoned.

MAP NO. 2605
14 OCTOBER 1943

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Due to its large size, the following document has been filmed in segments. The order of the segments is as follows: left to right, top to bottom.

PROVISIONAL EDITION

CONFIDENTIAL

ALBANIA: ROADS

- Asphalt, two-lane, all-weather
- Macadam, two-lane
- Metalled, (gravel or crushed rock) two-lane
- Metalled, one-lane
- Motorable, no information on width or type surface
- ..... Doubtful condition
- 28 Route numbers

ROADS ACCORDING TO TERRAIN TYPES TRAVERSED

- Roads across open plains (lake, coastal, or river)
- Roads along narrow river valleys
- Roads fringing base of highlands
- Roads across hill and low mountain terrain
- Roads across high mountain terrain

MAP NO. 2599
6 OCTOBER 1943

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R+A 1858

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